Engaging clinicians to use PLICS data to support changes in clinical practice

Case study

Nottingham University Hospitals
NHS Trust

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Synopsis and key learning points

This case study describes how finance staff at Nottingham University Hospitals NHS Trust have worked collaboratively with senior clinicians to use patient level data (PLICS) to support changes in clinical practice.

Key to the trust’s successful approach has been:

• a recognition of the need for information to be meaningful to clinicians and the way they work, rather than maintaining the focus solely on income mechanisms
• having a well embedded commitment to the quality of activity data before combining that with finance
• working over a period of weeks or months to build each clinical head of service’s confidence in the information being presented to them.
• ensuring there are skills within the organisation to embed sustainable change in clinical practice across the whole team
• developing and supporting clinical champions who can drive and lead improvements initially in the quality of data, and, subsequently, in service delivery.

“We are beginning to get examples of senior clinicians who are leading motivated teams using great information. Our task is to magnify that to become the norm rather than the exception.”
NUH senior manager
Introduction

Nottingham University Hospitals NHS Trust (NUH) is the fourth largest teaching hospital in England. It provides acute services to over 2.5 million residents of Nottingham and its surrounding communities, as well as specialist services for another 3-4 million people from across the region.

The trust operates from three main sites, with 90 wards and around 1,700 beds.

The financial challenge facing the trust

Like most NHS trusts, NUH has been under financial pressure, with a deficit of £47m incurred in 2015/16, and the 2016/17 figure expected to be close to £22m.

The trust has recognised that financial challenges of this severity cannot be addressed solely by the traditional approach of cost improvement programmes.

Although NUH, in common with most other trusts, routinely produced service budget statements, showing variation against previous months, this information was not always understood or believed by consultants, and did not provide them with the tools they needed to make changes in clinical practice.

“We didn’t believe there was such a variation in monthly performance when we seemed to be doing the same things” NUH consultant

Trust reporting had been focused on Healthcare Resource Groups (HRGs), as the mechanism for collecting income, but these were not meaningful to clinicians, and therefore did not promote successful joint working between financial and clinical teams.

This led to an inevitable clash of worlds: the financial language of HRGs and absolute values versus the inherent variability in delivering patient care.

Hence finance staff have had to adapt and develop a new approach to working with their clinical colleagues.

“The common currency that links us with managers is time, not money. Time is money. If you reduce time in patient pathways, you increase quality and lower cost.” NUH consultant
The trust’s approach to engaging clinicians

Recognising that decisions made by consultants resulted in the deployment of most of the trust’s resources, as well as generating the majority of income, NUH’s approach to engaging clinicians was twofold:

- making sure clinicians were involved in both the procurement of improved information systems, as well the design of their own service specific dashboards
- promoting the development of clinical leadership skills to drive the behaviours that are needed to make sustained changes in clinical pathways and patient care.

Clinical involvement in system selection and design

The trust installed a patient level costing and information system (PLICS), provided by Healthcost (now QuintilesIMS) in 2010, and started to implement Qlikview as their business intelligence tool.

A key requirement of the system was to ensure that it was built up from the patient level, instead of a top down apportionment. This has allowed the clinicians to see interventions such as diagnostic tests appearing on the patient bill on the date they ordered it, and so they have started to have greater confidence in the accuracy of the data.

A PLICS Board was established, which reports to the trust’s Executive Board. This is chaired by a consultant and is responsible for the trust’s Data Quality panel. Clinicians were also a key part of the team procuring the recently replaced patient activity system (PAS).

Discussions with consultants in the trust identified four key features that they wanted to have to help them use activity and financial information system effectively. These were:

1. a personalised login so they, and their service, are recognised by the system.
2. a more streamlined process for the viewer to get to the desired data (previously they had to log into three different systems)
3. an intuitive path through the system to patient level – so there were no more no more than six clicks to move from the top-level dashboard for each service down to the patient “bill”
4. clearly defined areas of concern, which could be shown using benchmarking

“We broke down HRGs into procedure codes as that is what the clinicians would understand. It is not exact but it works. We used pie charts to present it because clinicians like pie charts.

“Wow look at that slice, skin trauma and cancer – you are bad!”

Medics are incredibly competitive – if you tell them they are bad they will do something about it. Everybody knows now what the job is: to save money in skin cancer and trauma.” NUH consultant
Clinical leadership programme

To support the implementation of PLICS and the change in financial management from traditional budget statements to service line reports, NUH specified and commissioned a ‘hands on’ dynamic financial leadership programme. The aim of the programme was to develop clinical business acumen in clinical leaders. It was recognised that many business and leadership models were available, so the Trust prepared a specification and undertook a market test for an appropriate model and preferred provider.

The resulting programme was adapted from a commercial model and branded as “Service Line Leadership” for use within the trust. It was designed to develop the clinical leadership skills that consultants need to gain support from their teams in making lasting changes to patient care protocols and pathways. More than 400 clinicians and senior managers have now taken part in the programme over three years which has been delivered in partnership with Beffective, a channel partner for Franklin Covey.

Leaders were provided with worked examples to understand the trading position of a service and how to influence it through their own, and their teams’ behaviours, rather than managing budgets in a grant culture. Through interactive sessions, participants explored how the trust had become more financially astute through the introduction of service line reporting and patient level costing and information systems.

The programme was designed to enable leaders, both clinical and managerial, to understand how they can influence the financial results of the trust at the same time as increasing the quality of care and safety of their services.

NUH has three clear objectives in developing clinical leaders who can deliver lasting change. These are that:

• training should embed the behavioural techniques and skills needed for leadership
• clinicians within the trust will develop a granular understanding of the costs of the services they are responsible for delivering
• within the trust there is a developing cohort of inspirational leaders
Rolling out PLICS

A staged approach to rolling out the use of PLICS has been taken, with the finance team working very closely with the head of each service on an individual basis.

Over a period of weeks, a tailored dashboard for each service is developed, which provides information in a format which is most useful to that clinical team. A weekly assessment is made of that service head’s confidence in the reliability of the PLICS data.

Only when that service head’s assessment score reaches nine out ten is access to PLICS rolled out to other clinicians in that department.

This is an example of the score sheet used when working with the head of a service newly introduced to PLICS:

![NPS Score Sheet](image-url)
The costing team work on the development of the dashboards by designing them in spreadsheets. These are then built by Healthcost, the PLICS system supplier. The resulting PLICS dashboards are viewed through the trust’s Business Intelligence tool, QlikView. So far, the PLICS dashboards have been rolled out across 56 services in NUH, with 179 clinicians having accessed the system.

The trust’s finance director regularly receives a PLICS scorecard showing which clinical teams are accessing PLICS dashboards, and discusses this with the divisional managers at monthly performance meetings.

“Suddenly we started having conversations.” NUH consultant

Below is an example of the PLICS scorecard produced in the trust, covering the year 2015-16, used by the finance director to assess usage of the system.
The dashboards - clinician favourites

As described above, dashboards are designed in partnership with the lead clinician for each service, and consequently there is considerable variation in both the content and the style of presentation. However, there are many common features across the services, and three of the most popular examples have been selected to be shown here:

This first one shows the cost and income of care for a single patient. By the fifth day of admission, the income received from commissioners for that person’s admission is exceeded by the costs incurred.

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"Clinicians now talk about margin and PLICS in performance meetings rather than budgets." NUH finance manager

This second example, for the same patient, shows costs of admission, broken down by day and resource. This patient, who was medically fit for discharge on the Friday, had no clinical input for three days, prior to being discharged on the Monday.
This final example, for a different patient, shows the cost profile by day, but with the addition of information from clinical systems. This includes Medically Safe for Discharge date (EDD), as well Section 2 & Section 5 dates, where social care has been notified that this patient needs supported discharge. NUH can show the costs incurred for patients who have been declared medically fit, and provide reports by consultant and specialty, where Section 2 and Section 5 paperwork has not been completed.
The benefits of clinical engagement in PLICS – success so far

Some of the early benefits from clinical and financial collaboration in the use of PLICS data are summarised below:

**Changing practice after understanding the costs of plastic surgery**

How PLICS helped:
- the information highlighted that certain procedures were profitable as day case, but loss making as elective inpatients
- the Burns Unit, with a higher staff to patient ratio, was being used for relatively simple elective procedures

What NUH did:
- improved systems and redesigned rotas
- changed service model from elective to day case for some procedures
- increased focus on the best use of limited resources
- regular monitoring of PLICS intelligence which is reported to the consultant group

The results:
- elective surgery moved towards day surgery unless case of need, saving £750k each year.
- consultant on-call weekly rota is now aimed at reducing length of stay and providing a rapid response to trauma and emergency department (ED) patients
- use of telemedicine for burns patients in ED, with diagnosis by the on-call consultant in the Burns Unit
- pre-op assessment for all patients to reduce the numbers of cancelled operations

**Changing practice after understanding the financial impact of delayed transfers of care**

How PLICS helped:
- PLICS was used to identify the costs of care for each patient
- analysis showed the costs that have been incurred after the medically fit for discharge date
- case studies showed that delays were incurred because of lack of consultant cover at weekend and delays in requesting assessment by community staff.

What NUH did:
- systems were improved to better identify the medically fit date
- process changes enabled more diagnosis at the start of the stay
- predetermined prompts are included on the PAS to notify community teams that a patient is ready for discharge in 48 hours

The results:
- improved reporting of medically fit dates
- better discharge planning and processes
- more transparency on the costs of delays
- a one day reduction in length of stay

“I can look at my theatre cases and see why some cost more than others. This information is much more interesting and can galvanize clinicians into making changes.” NUH consultant
Changing practice after understanding the cost of cataract surgery

How PLICS helped:
- the data showed significant variation in the costs and profitability of cataract theatre lists
- analysis of these differences identified this was purely because of the number of cases per list

What NUH did:
- used the data to have meaningful engagement with clinicians using robust information
- implemented standard procedures for cataract surgery
- made changes to theatre scheduling and list planning

The results:
- improved productivity of theatre lists
- less variation in theatre time per case as standard procedures are followed
- better theatre turnaround time

Understanding the true cost of locally priced services

How PLICS helped:
- the cost and activity information was reconciled to contract information
- analysis was undertaken to understand variances from national benchmarks

What NUH did:
- detailed cost information was shared with commissioners where an appropriate benchmark was not available to set local prices.
- discussions were held with individual services and commissioners to establish service specifications using knowledge from detailed costings
- savings opportunities were identified from benchmarking

The results:
- commissioners agreed to pay revised prices based on detailed understanding of service costs
- services became financially sustainable, and, in some cases, led to redesign in partnership with commissioners

Whilst the review had no direct impact on patient care, ensuring that coding and cost apportionment is correct increases the chance of securing a financially viable service. Without this financial stability, there is a risk that NUH will cease undertaking a certain procedure, and patients will need to travel elsewhere.

“We realised there were costs associated with zero-day length of stay on normal admission processes. Each consultant was challenged to voluntarily transfer elective lists into vacant day case capacity.” NUH consultant

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